BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
Washington D.C. 20554

In the Matter of	)	
	)	
Revision to Rules Authorizing the Operation of Low Power Auxiliary Stations in the 698-806 MHz Band	)	WT Docket No. 08-166
	)	
Public Interest Spectrum Coalition, Petition for Rulemaking Regarding Low Power Auxiliary Stations, Including Wireless Microphones, and the Digital Television Transition	)	WT Docket No. 08-167

EX PARTE COMMENTS

The Professional Audio Manufacturers Alliance ("PAMA"), through its undersigned counsel, hereby submits these *ex parte* comments in the above-captioned proceeding to offer guidance to the Commission as it considers the issues identified in the Notice of Proposed Rulemaking ("NPRM") and raised by other parties in recent *ex parte* filings.[1]

PAMA, founded in March 2003, is the unified voice and advocate of the professional audio manufacturing industry. PAMA's members include the leading professional wireless microphone manufacturers in the world, representing collectively over 80 percent of the U.S. market.[2] An important part of PAMA's mission is to ensure that both its members and their customers are prepared to handle any rule changes the Commission may make that affect the design and operation of wireless microphones. This mission is critical because professional wireless microphone operations are now an integral ingredient of virtually every live event and many recorded productions in the

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[1] *See, e.g.,* CTIA Ex Parte Presentation, filed Dec. 3, 2008; CTIA Ex Parte Letter, filed Nov. 25, 2008; Alcatel-Lucent, APCO, AT&T, RCA, Cellular South, Cincinnati Bell, CTIA, MetroPCS et al. Ex Parte Letter, filed Nov. 13, 2008.

[2] PAMA's members include AKG Acoustics, a division of Harman Professional of Northridge, CA; Audio-Technica U.S. of Stow, Ohio; Bosch Communications Systems, a division of Bosch Security Systems, Inc. of Burnsville, MN; Sennheiser Electronic of Old Lyme, CT; and Shure Incorporated of Niles, IL.

context of regular television network, cable and satellite TV operations covering news, sports, and entertainment, as well productions in live theater, educational institutions, large houses of worship, corporate meeting facilities, etc.

At the outset, PAMA wishes to make clear that the professional audio manufacturing industry has been a pro-active and constructive force looking to prevent interference between wireless microphone systems and primary users of the spectrum band. PAMA does not object to the eventual transition of secondary wireless microphone operations out of the 698-806 ("700") MHz band but the Commission must recognize that the industry has not had an adequate opportunity or clear direction to affect successfully such a change. A minimum two-year transition period is requested to allow wireless microphone manufacturers and users to accomplish this difficult task.[3]

I. PREEXISTING AND ONGOING EFFORTS BY WIRELESS MICROPHONE MANUFACTURERS WILL HELP TO AVOID CUSTOMER HARM AND POTENTIAL FUTURE INTERFERENCE

PAMA has been closely following the Commission's actions regarding new primary uses of the 700 MHz band and the current proposal to transition low power auxiliary stations ("LPAS"), including wireless microphones, out of the 700 MHz band. PAMA and its members are interested in ensuring that wireless microphone users are not burdened with disruptive and costly upheaval as a result of an immediate prohibition of 700 MHz wireless microphone operations. PAMA is also dedicated to ensuring that wireless microphone users do not suffer from interference by new primary users operating at much higher power levels and under different conditions.[4] For this reason, over the past several years, some PAMA members have ceased development in this band and vacated operation while other have worked to minimize potential interference between wireless microphone operations and new primary users in the 700 MHz band.

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[3] With the exception of locations in which the 763-775 MHz and 793-805 sub-bands have been assigned to operational public safety networks.

[4] PAMA is also dedicated to preventing interference from wireless microphone systems to primary users.

Those efforts have included significant customer education,[5] innovative equipment trade-in programs, and the dedication of considerable time and resources toward the development of new products operating in other bands. Many of these efforts were undertaken years ago, and without Commission direction, with the aim of providing customers with a variety of options to meet their growing demand for high-quality, interference-free wireless audio as the regulatory landscape for wireless audio continued to shift.

PAMA understands the needs of professional wireless microphone users probably better than any other association or organization. PAMA's members must work closely with their customers across a variety of industries to develop wireless microphone products that meet their needs, both now and in the future. Good customer relations and brand loyalty are not created by developing or pushing obsolete technology. Therefore, PAMA strongly objects to the insinuations of some of the commenters in this docket that manufacturers of wireless microphones knowingly developed and promoted 700 MHz wireless equipment to their customers that was obsolete, and therefore any transition period would just be rewarding bad conduct. Contrary to this misleading description of events, professional audio manufacturers have provided valuable assistance to customers and have continued to explore a variety of spectrum and technology options that will suit wireless microphones without interference from -- or to -- primary users.

II. THE COMMISSION SHOULD NOT ADOPT PROPOSALS FOR IMMEDIATE PROHIBITION ON 700 MHZ OPERATIONS THAT WILL CAUSE SEVERE AND UNNECESSARY HARM TO WIRELESS MICROPHONE USERS

PAMA does not oppose the eventual transition of secondary wireless microphone operations out of the 700 MHz band but does object to proposals that will cause

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[5] Many manufacturers have devoted significant time and effort to guide customers to equipment using alternative frequency ranges and have restricted selling or made 700 MHz equipment available only on a special order basis.

unnecessary harm to wireless microphone manufacturers and users.[6] In the interest of correcting any misimpression left by other parties in this proceeding, it is worth highlighting how it is that secondary wireless microphone operations exists in the 700 MHz band today. At the time the Commission adopted its DTV rules a decade ago, it did not prohibit wireless microphones in the 700 MHz band, and in fact expressly declined to do so.[7] Because wireless microphones have always operated on a secondary basis, it was and, in fact, still is reasonable to believe that they could successfully continue to operate in the 700 MHz band on a secondary basis without harm to primary users even after the DTV transition. In the years since the Commission's DTV order, the Commission continued to authorize new wireless microphone equipment and users in the 700 MHz band without any indication that it would require an immediate halt to their operation on February 17, 2009, without any reasonable transition period. Indeed, it is only the concern of the wireless microphone manufacturing industry *to avoid interference from stronger new primary service transmissions and to preserve the best wireless microphone customer experience possible* that prompted their voluntary action to develop alternative products and in some cases trend away from the 700 MHz band for secondary uses. Some wireless microphone manufacturers aimed to avoid potential future customer concerns by steering product development away from the 700 MHz band. Some ceased all development in this band, yet legacy wireless still exists in the field despite action initiated 10 years ago. The transition process is slow and difficult, and legacy end users

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[6] PAMA does not object to the prohibition of further manufacture of 700 MHz wireless microphone equipment so long as the prohibition only applies to *U.S. domestic distribution* on the DTV transition date. However, PAMA does object to any prohibition on the manufacture and distribution of 700 MHz equipment for *export.* Such a rule would be over inclusive as it would reach well beyond the domestic spectrum issues that the Commission purports to address in the NPRM and would unnecessarily obstruct U.S. manufacturing of equipment that will operate in compliance with the laws of other countries. Moreover, such a rule would run counter to the express prohibition in the Communications Act on the Commission from making regulations governing interference, performance standards, equipment marketing, etc. applicable to devices manufactured solely for export. *See* 47 U.S.C. § 302(c).

[7] *See* Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service, Docket No. 87-268, *Memorandum Opinion and Order on Reconsideration of the Sixth Report and Order*, 13 FCC Rcd 7418 at ¶ 176 (Feb. 23, 1998).

should not be subjected to abrupt disruption of use for lack of a clear transition plan or path.

It is worth noting that the parties now complaining about existing secondary operations (including those who chose with full knowledge to acquire primary licenses in this spectrum) are only now -- at the proverbial eleventh hour -- raising objections and urging the Commission to take drastic, harmful and, in PAMA's view, unnecessary action against secondary operations. It was not until August 2008 that the Commission announced an abrupt "about-face" in its policy that an immediate prohibition of secondary LPAS in the band would need to occur. It is noteworthy that no incident or development occurred in August 2008 that prompted the Commission's change of mind on this issue. The Commission could have announced this significant change in LPAS regulation years ago but chose not to. The Commission's decision to take this dramatic action at this late date does not justify placing onerous burdens on the wireless microphone community.

Even then, it was not until the Commission articulated the new band plan in its November 14, 2008 White Spaces Report and Order[8] that professional audio manufacturers have been able to have a clearer vision of the available spectrum in the TV bands for transitioning users.[9] Now that manufacturers know that the core TV bands will continue to be home to wireless microphones, albeit with new conditions, they are able to provide better guidance and assistance to transitioning 700 MHz users. But PAMA and its members can only do so much to avoid the mass disruption to services and industry that will result from a faulty transition of LPAS out of the 700 MHz band. As detailed below, there is a great need for the Commission to adopt a reasonable timeframe of two years for the transition of wireless microphones out of the 700 MHz band and to avoid

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[8] *In the Matter of Unlicensed Operation in the TV Broadcast Bands*, Second Report And Order and Memorandum Opinion and Order, FCC 08-260, rel. Nov. 14, 2008 (White Spaces Report and Order).

[9] PAMA concurs with the statements expressed by other parties in this proceeding that debunks the incorrect view stated in the NPRM that 300 MHz of alternate spectrum is available for wireless microphone operations. *See, e.g.,* Reply Comments of Shure Incorporated, WT Docket Nos. 08-166 and 08-167 at 5 (filed Oct. 20, 2008)("Shure Reply Comments").

the unnecessary and unconscionable burden that would result by imposing an abrupt immediate prohibition on the operation of 700 MHz wireless microphones at the February 17, 2009 DTV transition date. PAMA recognizes the need to minimize disruption to public safety operations, however, and would not object to the exclusion of channels 63-64 and 68-69 from the two year transition period if necessary to protect emergency communications.

III. A MINIMUM 2-YEAR TRANSITION PERIOD IS NEEDED

There are a number of reasons why the immediate prohibition on 700 MHz operations lobbied for by CTIA and PISC will not work, and will be highly disruptive to the industry. First, time is needed to do an extensive public outreach to 700 MHz band wireless microphone users to notify them about the transition. Second, there are many practical problems associated with the transition that cannot be addressed in an immediate prohibition. Finally, there is no good policy reason to require an immediate prohibition and to do so here would establish bad precedent.

In some respects, the challenge of advising 700 MHz wireless microphone users of an impending change is similar to the difficulties of advising the public about the DTV transition While PAMA's members have made a concerted and good faith effort to keep many large users of this equipment informed about the upcoming transition, PAMA believes that there are still many users that are unaware of the potential need to transition to other frequency bands. The Commission has been focused for the last few years on notifying the public about the upcoming DTV transition through a wide variety of methods. However, even now, with all of the Commission's efforts, numerous public meetings, television and print media, it is estimated that there are still a large number of analog television users that are not ready for the transition. Yet in the case of 700 MHz wireless microphone users, the supporters of a flashcut transition urge the Commission to believe that such a regulatory "hard stop" on 700 MHz use in less than two months would be effective. As has been pointed out, some in the industry on their own initiative have been notifying and working with their larger customers about the upcoming transition. But, until recently there was little specific guidance manufacturers could provide even to

large customers and even now 700 MHz users do not have specific guidance from the Commission. The Commission cannot assume that the wireless microphone industry has been able to prepare for and could realistically accomplish a transition away from 700 MHz uses by the upcoming DTV transition date. Therefore, the Commission needs to establish a clear transition period, with established milestones to be reached by certain dates, actions to be taken when new entrants have built out their 700 MHz networks, and a public outreach plan to reach all of these users prior to the transition. Realistically, to accomplish this the Commission would need to establish a transition period of at least two years, with channels 63-64 and 68-69, being the first to be cleared.

There also are significant practical problems that would make an immediate prohibition unreasonable. Both manufacturers and large users cannot be expected to make immediate radical changes. Many large users have invested millions of dollars in 700 MHz band wireless microphone equipment over the years. A complete replacement of this equipment would take a significant amount of time and impose a major expense that would require funds that are likely not budgeted for the upcoming year. In weighing proposals that will force major new expenditures, the Commission must take notice of the weak and worsening economy and the very real difficulty in finding funds for any new capital purchases. Many of the large users are broadcasters, who have been hit particularly hard in today's economy.[10]

Further, even assuming a company has the money to make the purchases, it still needs time sufficient to identify suitable equipment and explore different manufacturers and technical approaches to find the solution that works best for its needs. For instance, finding alternate frequencies for displaced 700 MHz equipment of large users, coordinated with their existing gear below 698 MHz, is not a trivial task. Some projects involving major entertainment venues took months of analysis, planning, order processing, and installation. These companies were ahead of the curve, but many large users have yet to make concrete plans, pending the FCC's final ruling.

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[10] It has been suggested that the Commission should explore the possibility of getting the new users of the spectrum to help fund the transition, as has been done in other cases where the Commission has forced existing users out of a particular band. *See, e.g.* Nady Comments at 9.

From the manufacturer's perspective this transition time is needed to accommodate new product development where a new product line is necessary. New product development cycles normally require 2-3 years to develop a new line (including 2-3 new transmitter models, 2 or more new receiver models and various associated accessories, including antennas, line and distribution amplifiers, and system management software.) New product development also requires product testing and regulatory approvals for equipment certifications, which can run up to three (3) months and occasionally six (6) months. Introducing new products also requires time to deliver new products fully into distribution channels. Large users also need time to have the equipment delivered and installed. All of these practical problems argue in favor of a minimum two-year transition period.

Finally, a "hardstop" prohibition under these circumstances would just be plain bad policy. As of today, the Commission's rules allow for the manufacture, distribution, and use of 700 MHz wireless microphones. While there is an NPRM pending that proposes to change this, the fact of the matter is that the rules remain the same as they have been for the last decade since the Commission first proposed the DTV transition to occur on February 17, 2009. For the Commission to make a radical immediate prohibition on further operations at this late date would fly in the face of how the Commission has handled other transitions, which often have had multi-year transitions built in. A minimum two year transition period is very modest compared to other transitions.[11]

An immediate prohibition is also bad policy because the record clearly shows that there are not going to be any new services up and running on February 17th that could potentially receive interference from existing wireless microphone users. The new 700 MHz licensees are not expected to build out their networks everywhere at the same time. To the extent that a new 700 MHz licensee begins to build out its network, and testing finds some interference, then the transition could be required to occur faster in those few instances. But for the vast majority of the existing users, they should be given the full two year transition period.

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[11] *See* Shure Reply Comments at 3-4.

Respectfully submitted,

/s/

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